

# JUBE

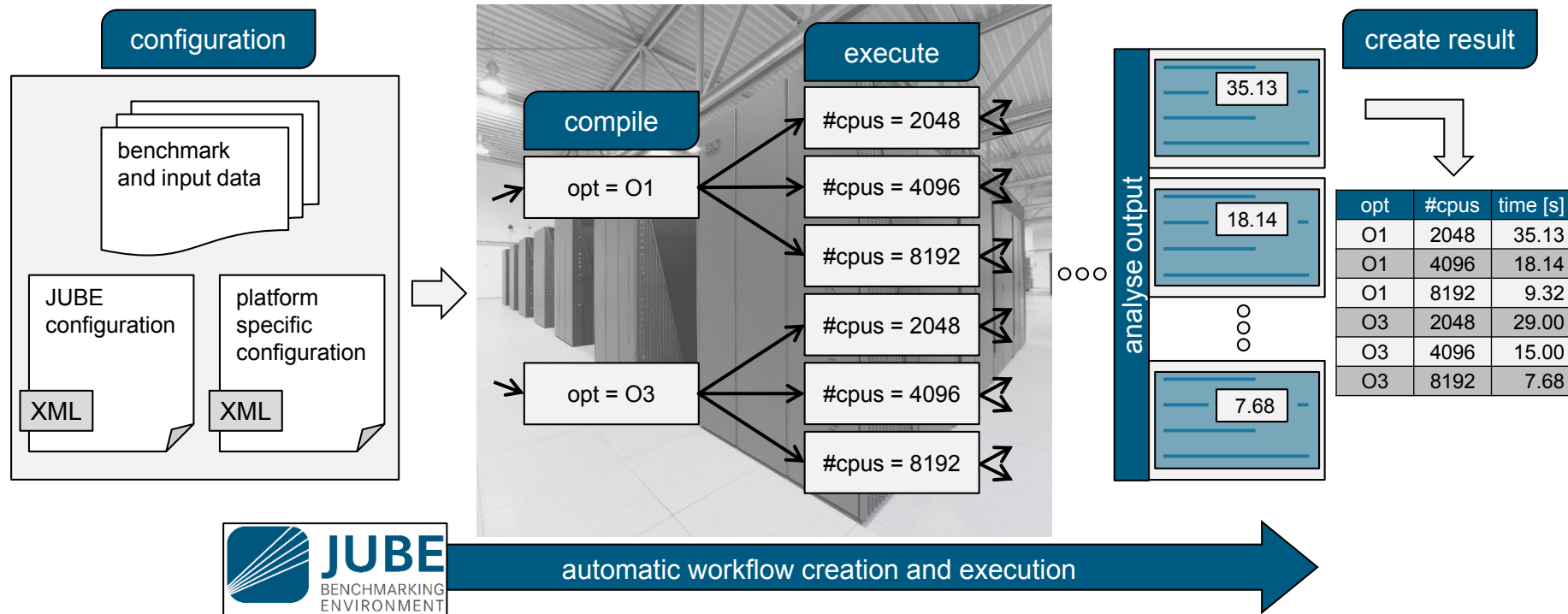
## A Flexible, Application- and Platform-Independent Environment for Benchmarking

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# What is JUBE?

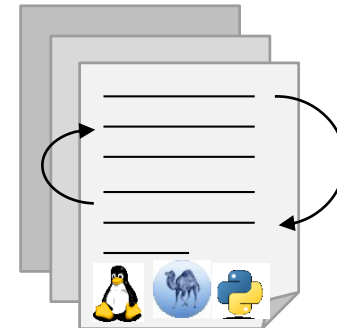
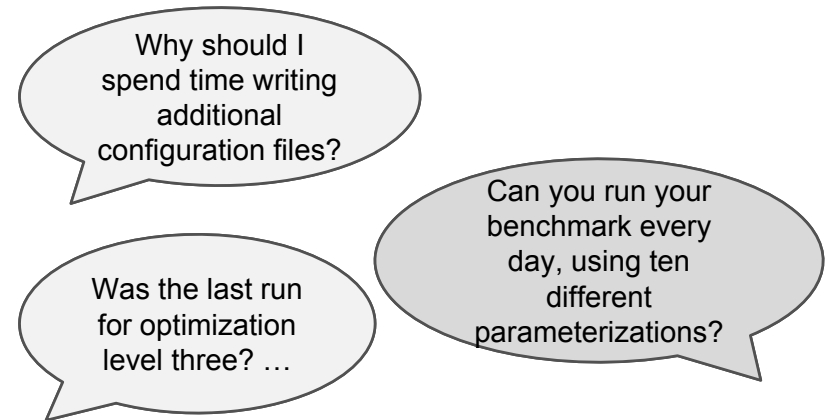
- Generic, configurable environment to run, monitor and analyse benchmarks in a systematic way
- Developed 2008, redesigned 2014
- Also usable for testing or production scenarios



# Why JUBE?

## Alternatives:

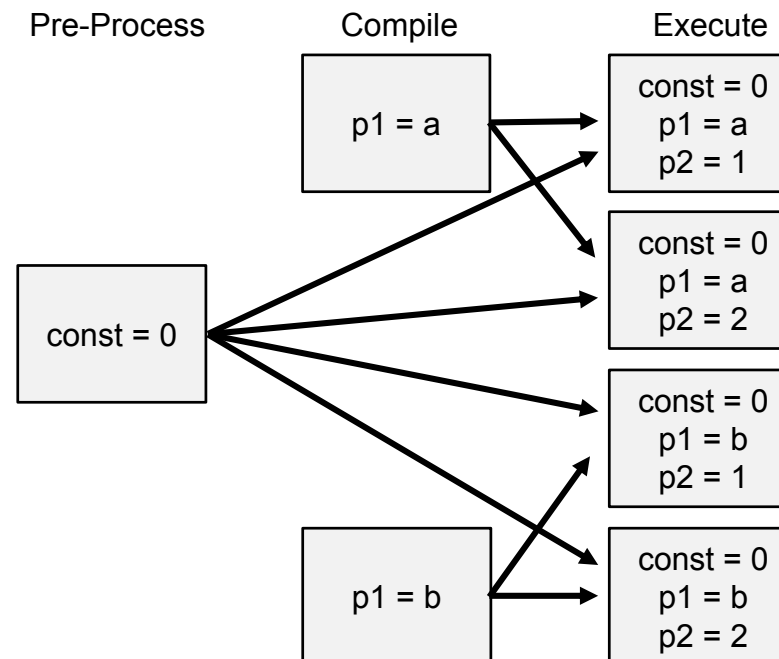
- Manual benchmarking:
  - Easy to use
  - Time-consuming
  - Very error-prone
- Benchmark specific script solution:
  - Optimized
  - Changes can be time-consuming
  - Portability problems



*JUBE provides a generic workflow and parameter handling environment, but also supports more flexible and specialised approaches.*

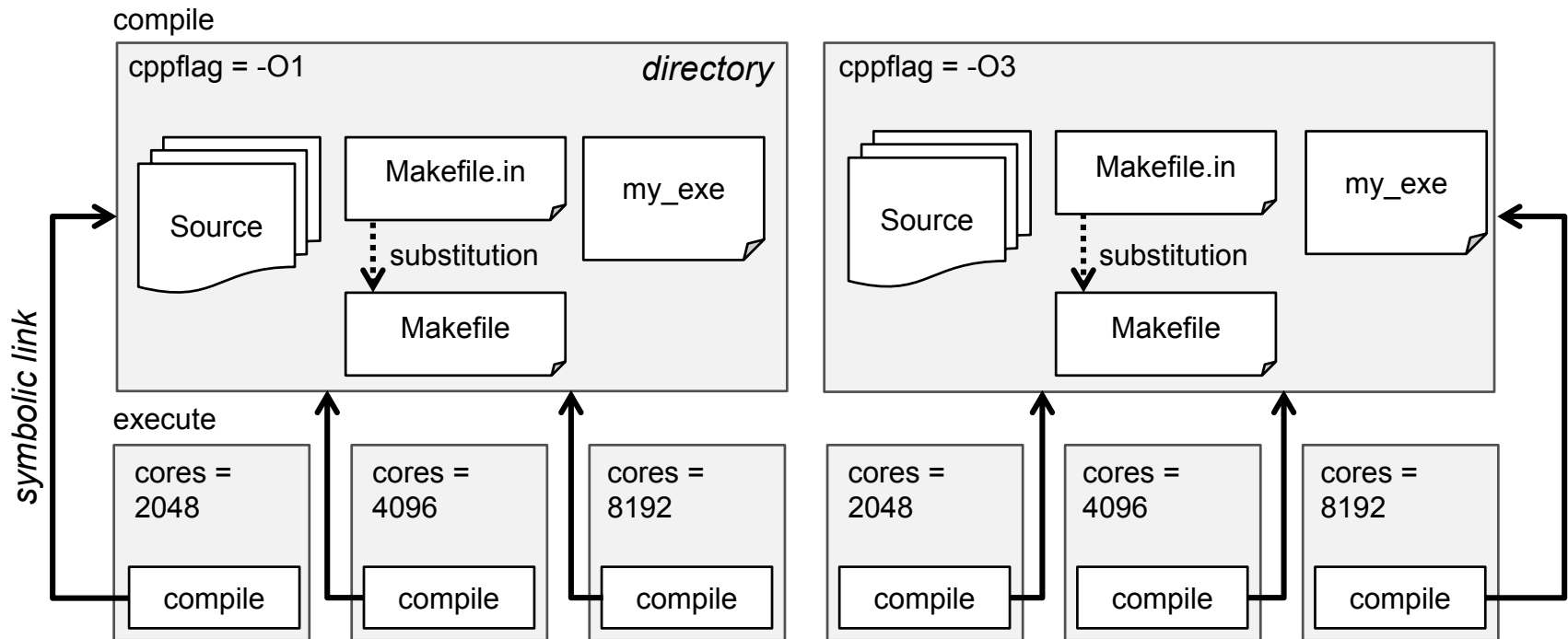
# Key Concept: Workflow creation

- Dependency driven step structure
- Parameter based expansion of steps



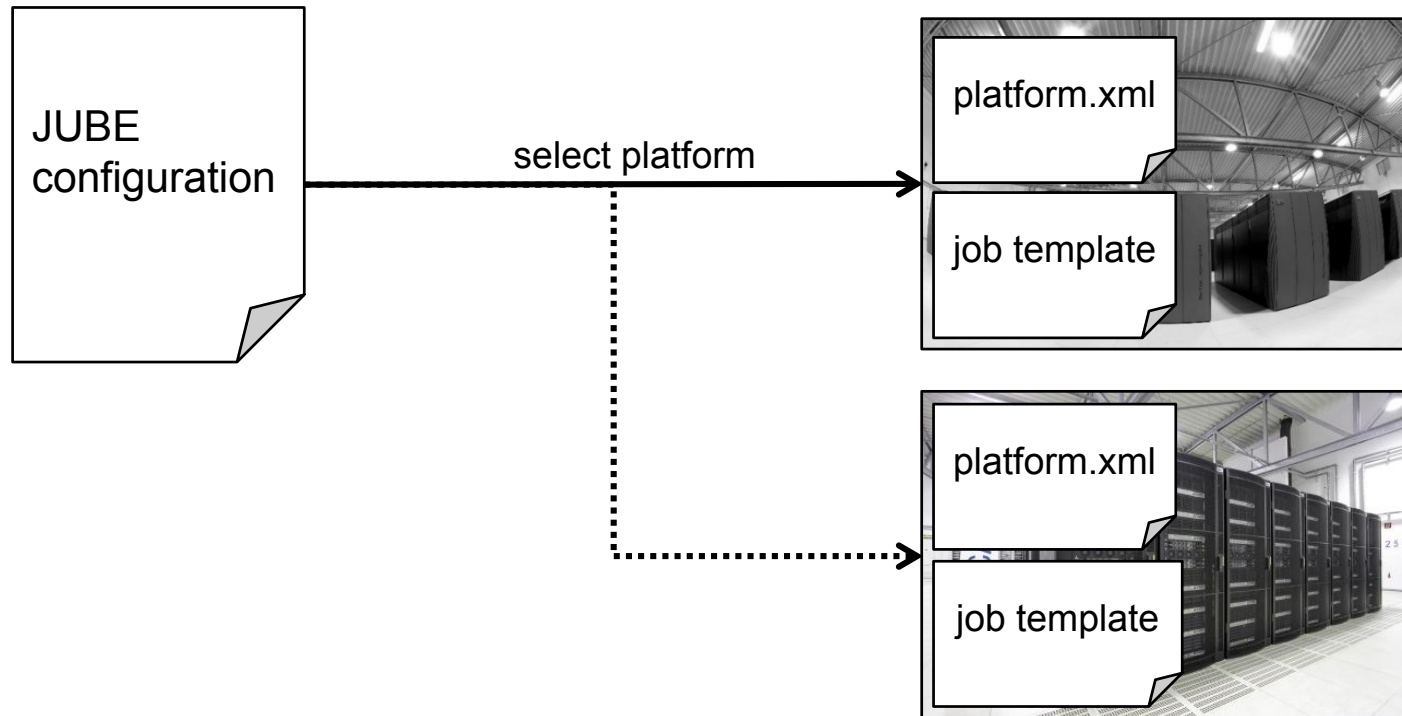
# Key Concept: Directory and data handling

- Each parameter/step combination runs in a separate sandbox directory
- Automatic directory connectivity creation



# Key Concept: Platform independence

- Separation of platform dependent and independent configuration options



# Example Benchmark Configurations

- **HPL:** High-Performance Linpack Benchmark  
`www.netlib.org/benchmark/hpl`
- **IOR:** (InterleavedOrRandom) I/O benchmark  
`sourceforge.net/projects/ior-sio`
- **mdtest:** Metadata test benchmark  
`sourceforge.net/projects/mdtest`

Publicly available and extensible JUBE configuration file repository:

`https://github.com/FZJ-JSC/jube-configs`

# Outlook and open Tasks

- Extend JUBE benchmark configuration repository
- Extend job system interaction
  - Allow JUBE to monitor submitted jobs more easily
- Add another configuration file input format
  - Not everyone likes writing XML files by hand



# Where to start?

## Download and Tutorials:

- `www.fz-juelich.de/jsc/jube`
- Open Source (GPLv3)



## Prerequisites:

- OS: Linux
- Python 2.6, Python 2.7, Python 3.2  
(or a more recent version)

## Contact:

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